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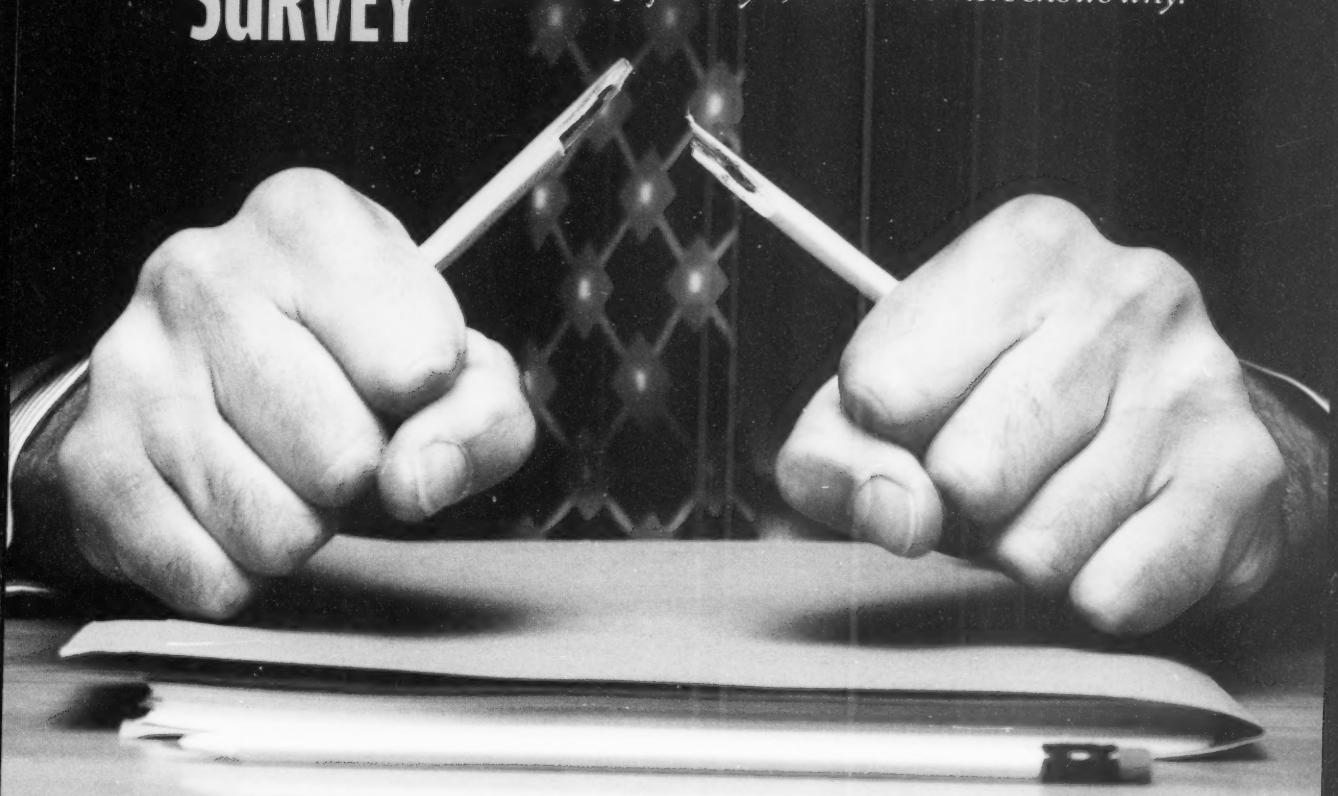

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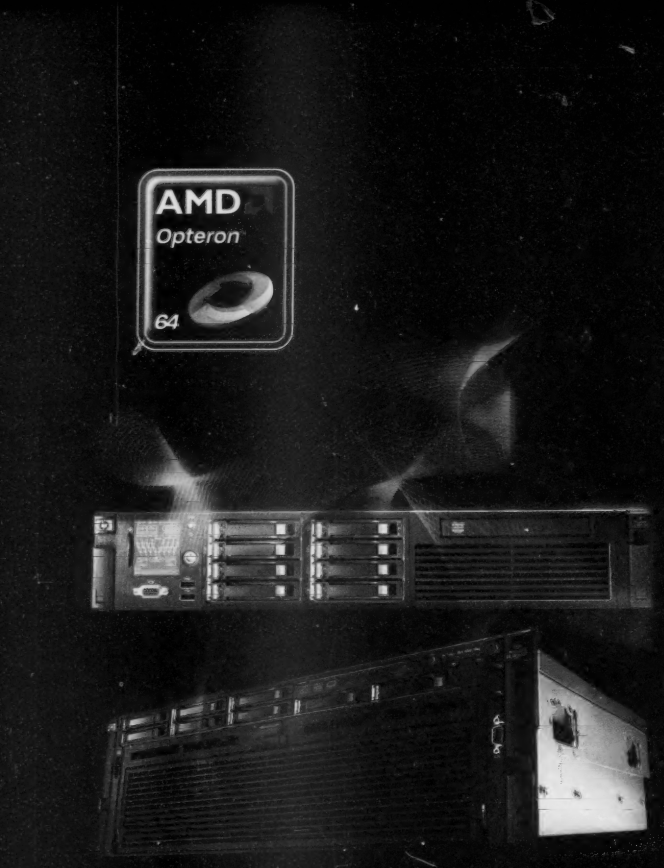


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**THIS ISSUE | 04.04.2011** [ VOL. 45, NO. 7 $5/COPY ]

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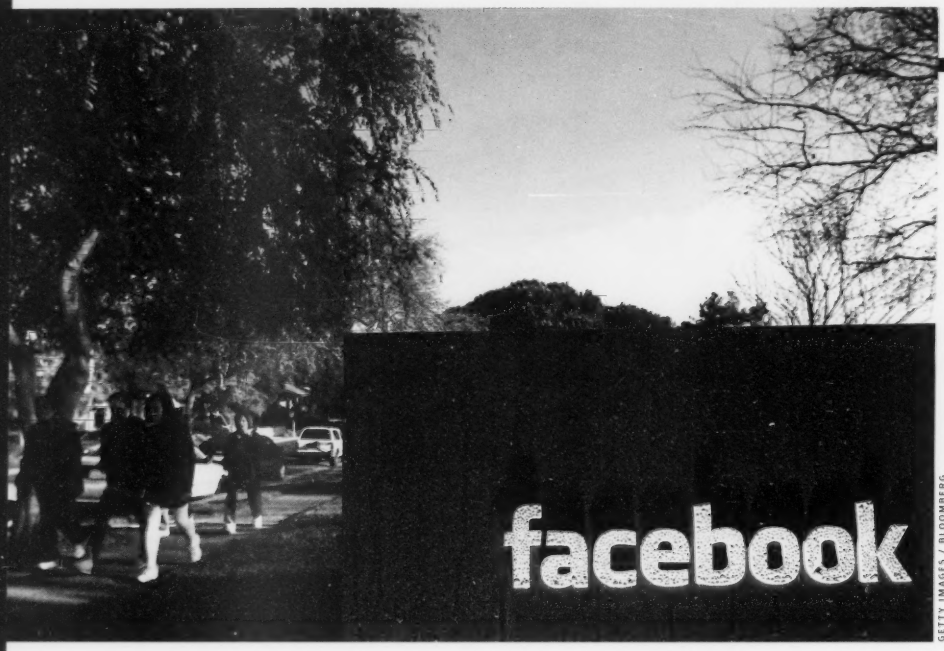


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DATA CENTERS & SERVERS

## Facebook Plans to 'Friend' Microservers

**FACEBOOK IS** bucking the trend toward server virtualization and wants to install microservers for inexpensive growth and quick failover, a company official said last month.

Gio Coglitore, director of Facebook Labs, spoke at an Intel press briefing, where he came out in support of Intel's plans for an expanded lineup of processors for microservers, ranging from a 45-watt Xeon to an Atom-based processor that consumes less than 10 watts of power.

Facebook has tested microservers in production and is interested in the architecture for its massive data centers, Coglitore said.

Microservers, an architecture that Intel introduced in 2009, are small, low-power, one-processor servers that can be densely packed into a data center.

Server makers, including Dell, SeaMicro and Tyan, have adopted the architecture, which has been most popular among large cloud service providers.

Facebook will probably start implementing microservers on a large scale late this year or early next year, Coglitore said.

The social media giant sees microservers as an inexpensive way "to scale more effectively," he said. Also, Facebook wants to be able to balance its computing load across many systems and have the capacity to deliver a consistent user experience even if it loses a server.

"As you start to virtualize, the importance of that individual server is greatly enhanced, and when you have that at scale, it becomes very difficult," Coglitore said.

*– Stephen Lawson, IDG News Service*

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SOFTWARE DESIGN

## Report Says SOA Is Still Relevant And Worthwhile

Not long ago, the buzz-phrase "service-oriented architecture" saturated the IT industry, before being overtaken by the cloud. But SOA remains alive and relevant, Forrester Research reported last month.

SOA is a software design approach where systems are composed of interoperable "services" featuring reusable code.

According to Forrester's report, 71% of the 1,035 enterprises that responded to its recent survey are already using SOA or will be by the end of this year.

Moreover, companies are happy with how their SOA efforts have turned out. "Forrester measures SOA satisfaction by whether it has provided enough benefit that an organization will be expanding its use of SOA. By this measure, 77% of enterprise respondents are satisfied," the report said.

Ultimately, the data suggests that companies that haven't considered SOA should do so, according to the analysts who authored the report.

"Many well-meaning people in the industry cast SOA as simply a way to do application integration, thus making it seem irrelevant to anyone whose integration problems seem to be under control," they wrote. "Others make it sound like SOA takes a huge investment to get started. Neither of these perspectives is true."

– CHRIS KANARACUS, IDG NEWS SERVICE

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**STORAGE**

# Future PCs to Pair Flash and Disk Drives

**SOLID-STATE DRIVES** won't capture the entire PC storage market in the near future, because more and more PCs will begin to combine flash memory and traditional hard disk drives for cost and performance reasons, according to two storage analysts.

SSDs are quiet, fast and sturdy, but they're also relatively expensive. For that reason, most PCs will still have hard disk drives in the years ahead, said Tom Coughlin, president of Coughlin Associates, and Jim Handy, an analyst at Objective Analysis.

The analysts predicted that by 2016, 53% of new PCs and 25% of new laptops will have both flash memory and hard disk drives.

NAND flash memory, the main storage technology inside iPhones, iPads and SSDs, can offer a welcome layer of caching and buffering between hard drives and higher-performance dynamic RAM, Coughlin and Handy explain in a report titled "Two May Be Better Than One: Why Hard Disk Drives and Flash Belong Together," which was published by the Storage Networking Industry Association.

The use of flash will become more critical because of a growing "performance gap" between DRAM and rotating storage such as hard drives, according to the analysts. Extra caching would take pressure off the hard disk to provide temporary data storage. The pairing could also cut system power consumption.

"Rather than displacing HDDs, flash memory will allow customers to keep their low-cost HDD storage while enjoying performance enhancements that approach those of a pure SSD-based computer," the report says. "The required modicum of flash memory will be inexpensive enough to afford users these benefits without requiring a significant price premium."

"Paired storage," the term SNIA uses to describe the flash-HDD scheme, is already being used in data centers and high-performance computing operations.

– *Ralph Jennings, IDG News Service*

## Micro Burst

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Microsoft bid a whopping

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**WEB SOFTWARE**

# Critics: Google Apps Violate Disabilities Act

The National Federation of the Blind last month complained that Google Apps lacks features that blind people need and asked the U.S. Department of Justice to investigate whether organizations that adopt the software are violating the Americans With Disabilities Act.

The NFB said that Google applications such as Gmail, Calendar and Docs raise "significant accessibility barriers" for blind people using screen access technology, which converts computer displays into synthesized speech or Braille.

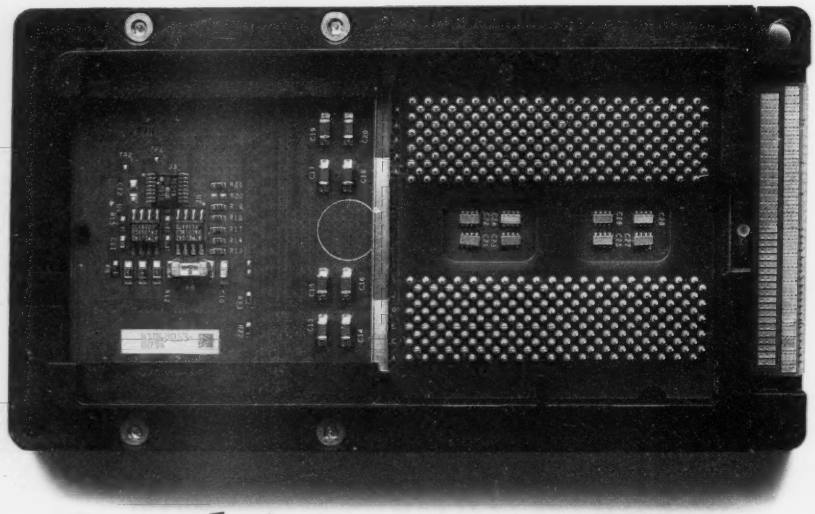
The group specifically asked the DOJ to look into potential ADA violations by New York University and Northwestern University, both of which use Google Apps for Education.

"The NFB will not tolerate this unconscionable discrimination against blind students and faculty," NFB President Marc Maurer said in a statement.

Alan Eustace, a senior vice president at Google, said that the company had "a productive discussion" with Maurer last month.

"He shared a powerful message on the importance of accessibility. We left the meeting with a strong commitment to improving our products," Eustace said in an e-mail.

– JUAN CARLOS PEREZ, IDG NEWS SERVICE



# Oracle's Itanium Move Shakes Up IT Agendas

**The vendor's decision to end software support for the Intel server chip could force expensive IT infrastructure changes. By Agam Shah and Patrick Thibodeau**

**TECHNOLOGY EXECUTIVES** at companies running Oracle databases and applications on Hewlett-Packard servers say that Oracle's decision to stop supporting Intel's Itanium chips could force them to undertake expensive hardware and software upgrades.

In a terse statement late last month, Oracle said it would stop further development of its software for Itanium-based servers, reasoning that Intel's strategic focus was on the x86 architecture and that Itanium was nearing the end of its life. Oracle also cited earlier decisions by Microsoft and Red Hat to end Itanium support.

The move came as a surprise to Hewlett-Packard, which ships the majority of Itanium-based servers.

"We are shocked that Oracle would put enterprises and governments at risk while costing them hundreds of millions of dollars in lost productivity," said Dave Donatelli, executive vice president for enterprise servers, storage and networking at HP.

HP said it will help customers migrate to other database software on Integrity servers.

At the same time, Intel CEO Paul Otellini issued a statement saying that the company remains "firmly committed" to upgrading Itanium technology.

Jim McGregor, an analyst at In-Stat, suggested that Oracle renounced Itanium to lure buyers into purchasing its proprietary or x86-based Sun servers to run Oracle software.

Mel Burslan, a senior systems engineer at HD Supply, a San Diego-based wholesale supply company, said Oracle's decision makes any plan to expand his company's deployment of HP-UX-based Integrity servers "look bleak."

HD Supply is slowly moving from HP-UX to Linux, but the cost of any move away from Itanium-based Integrity servers "would be [at the] several-millions-of-dollars level just for the hardware costs, and then a hefty sum for the consulting and additional manpower requirements," Burslan said.

Todd Sheetz, manager of database administration and enterprise architecture at Veolia Environmental Services North America, said Oracle's announcement could end up accelerating the Chicago-based firm's migration efforts. The company was already evaluating options for moving from Itanium to a new chip architecture, Sheetz said.

Veolia runs Oracle's PeopleSoft ERP system on HP-UX-based Integrity servers, and its database software on x86 servers running Linux.

"The only real option is to migrate to a different chip technology and therefore operating system. Since we are running Linux for the database, that will more than likely be the direction for the application stack as well," Sheetz said.

The company is leaning toward moving the PeopleSoft software stack to Linux on x86 systems, mostly because of cost considerations, Sheetz said.

"Support and maintenance [costs] for Itanium servers and HP-UX are much higher than x86 and Linux-based systems," Sheetz said.

Charles King, an analyst at Pund-IT, said that as Oracle moves away from Itanium support, "whatever performance customers can wrest out of their current systems is about as good as it's going to get."

"Customers that have invested on Itanium and Oracle together are going to have to start investigating other options for maximizing their performance," he added. ◆ **Shah** *is a reporter for the IDG News Service.* **Dan Nystedt** *of the IDG News Service contributed to this story.*

> **We are shocked** that Oracle would put enterprises and governments at risk while costing them hundreds of millions of dollars in lost productivity. DAVE DONATELLI (ABOVE), EXECUTIVE VICE PRESIDENT, HEWLETT-PACKARD

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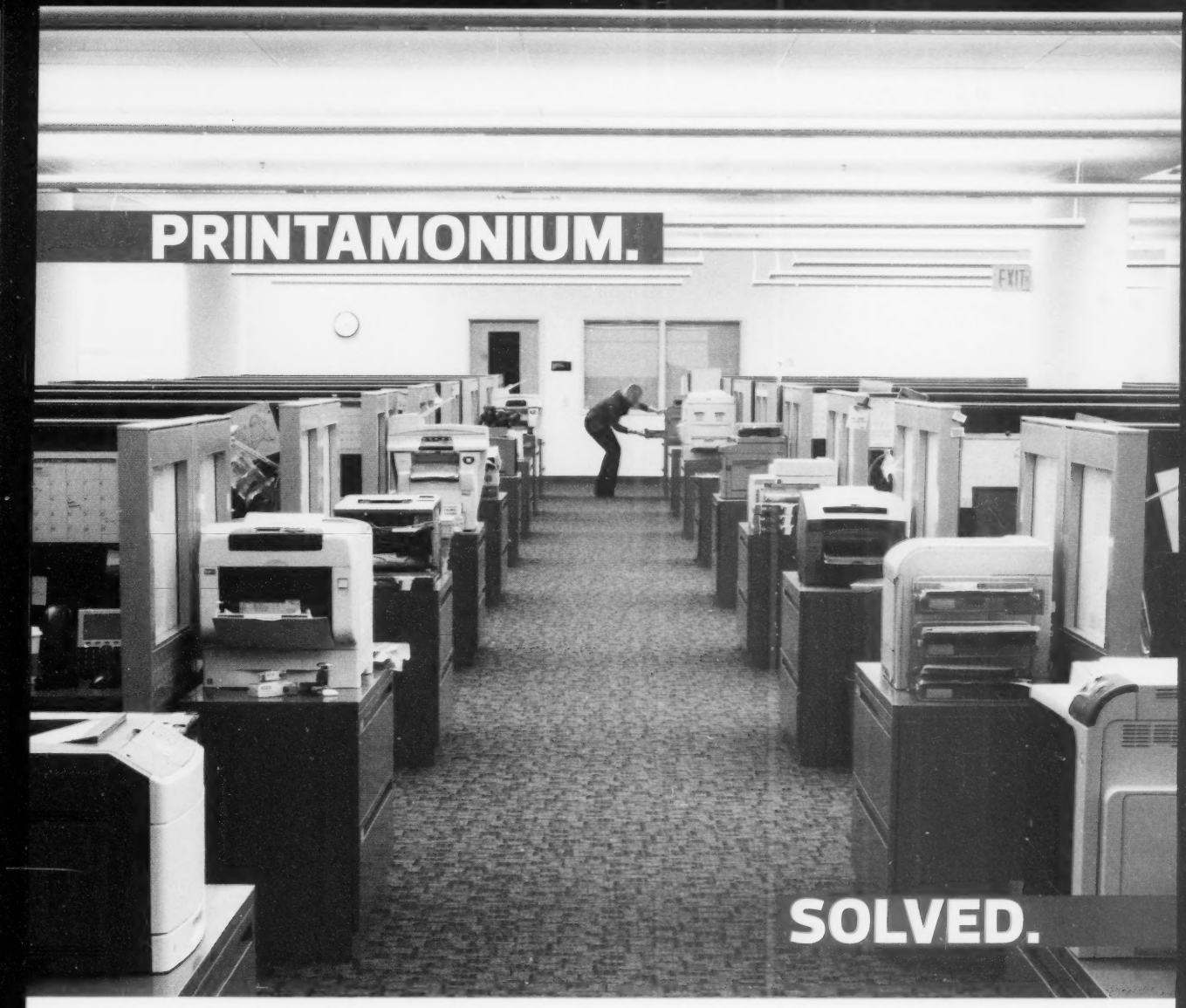


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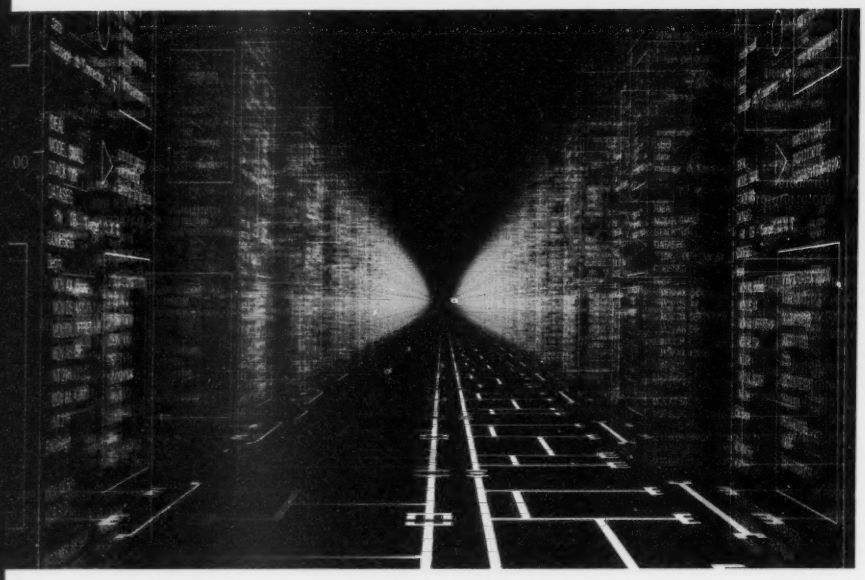

> "[The trend] will change our existing notions of privacy. A surveillance society is not only inevitable, it's irresistible."
>
> JEFF JONAS, DISTINGUISHED ENGINEER, IBM

# IT Looks for New Tools To Exploit 'Big Data'

**Companies want to mine terabytes of user- and machine-generated data to glean details about their customers' habits, activities and whereabouts.** By Lucas Mearian

**AS TOOLS FOR REAL-TIME AND BATCH ANALYSIS** of so-called big data emerge, IT operations are gaining the ability to track the activities, habits and movements of customers with great precision.

Experts say many businesses want to better analyze data stored in emerging massively parallel databases like the open-source Apache Hadoop framework to learn where their customers are employed, what they do in off-hours and who they spend time with.

The information could help companies tailor Web-based advertising and marketing materials to specific customers.

"[The trend] will change our existing notions of privacy. A surveillance society is not only inevitable, it's irresistible," Jeff Jonas, a distinguished engineer at IBM, said at the Structure Big Data 2011 conference in New York late last month.

The term "big data" refers to the massive amounts of information collected from machine- and human-generated computer system log files, electronic financial transactions, Web search streams, email metadata, search engine queries and social networking activity.

In 2010 alone, 1.5 zettabytes (1.5 billion TB) of such data, mostly machine-generated, were created. Companies collectively filled their data center storage systems with about 16 exabytes (16 million TB) of that data last year, said Jason Hoffman, founder and chief scientist at cloud software provider Joyent.

Some companies are already finding ways to dissect the rapidly growing data stores in creative ways.

For instance, bookseller Barnes & Noble has started analyzing an explosion of user- and machine-generated data about its online buyers to determine various customer behaviors, such as what percentage of shoppers make book-buying decisions based on their fondness for a particular author, said Marc Parrish, vice president of retention and loyalty marketing.

"Our Web logs on how customers are using e-readers and e-books have produced 35TB of data and will load us up with another 20TB this year," said Parrish.

"We have to decide with analytics on hand how we capture the customer's imagination and how we move forward," he added.

National Public Radio uses a reporting tool from software provider Splunk to track growing data sets to determine website audience usage trends in near real time, said Sondra Russell, a metrics analyst at NPR.

Splunk crawls logs, metrics and other application, server and network data and indexes it in a searchable repository.

NPR had been using the Web analytics engine Omniture, but Russell said she felt like she was jamming log-based data into a client-side tracking system that couldn't handle the organization's increasing volumes of data.

"I just want to know how many times someone listened to a program during a certain period of time," she said. "With Splunk, I had no delays between data appearing in a query folder and data appearing in reports. I can get any number of graphs without weeks of prep time."

Meanwhile, Hadoop, which unlike traditional database management technology is designed to work with multiple data types and data sources, is increasingly used by large banks, advertising companies, life sciences firms and pharmaceutical companies hoping to better leverage massive amounts of data, said Stephen O'Grady, an analyst at RedMonk. ◆

Computerworld's **Jaikumar Vijayan** *contributed to this story.*



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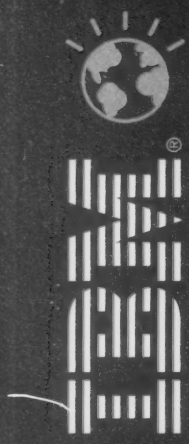

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# THE Grill

## Charles E. Christian

This healthcare CIO knows the language of medicine – and has the skills to listen.

**If you didn't work in healthcare, what industry would you want to work in?** Probably the National Parks Service. I like the outdoors.

**The most interesting thing most people don't know about you:** I used to race motorcycles.

**What technology do you find most amazing?** All of it. I'm a gearhead, but my children have turned me on to Apples and what they're able to do and how they all connect together and work in unison.

**CHARLES E. CHRISTIAN** *got his start in healthcare in the clinical arena, working in radiology before moving into IT. Today he's CIO of Good Samaritan Hospital, a 232-bed community facility in Vincennes, Ind., with 1,600 employees. Christian, 57, has become a leader in healthcare through his work at Good Samaritan for the past 22 years and through his service on various policy and advocacy committees. In January, he was recognized as the 2010 John E. Gall Jr. CIO of the Year by the College of Healthcare Information Management Executives and the Healthcare Information and Management Systems Society, which jointly bestow the award on healthcare IT executives who make significant contributions to their organizations and demonstrate innovative leadership through effective use of technology.*

**Does a clinical background, even if it's more than two decades in the past, give you an edge as CIO at a hospital?** When I'm sitting with doctors and nurses and they're talking about care, I can grasp that better than I could if I was just a technology guy, because I

*Continued on page 10*

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CIO Charles Christian (third from left) accepts the 2010 College of Healthcare Information Management Executives Collaboration Award.

> **We have some of the best healthcare on the planet,** but [as for] getting it rolled out to all our population, that's not necessarily true.

*Continued from page 8*

had that experience. So I guess it's given me another set of vocabulary. I can understand when doctors and nurses start talking in very clinical terms what they're truly trying to get across.

**What attracted you to IT?** I got the idea that it could have a transformational impact on healthcare.

**What do you consider your primary role?** We talk about healthcare CIO 2.0, that we have to get more strategic. Where I live is about 18 to 24 months out. Some days I feel like the fire chief, but we have to keep our eye on the future [and ask], "How are things happening in D.C. going to shape healthcare in 24 months?" Because if we're not looking at that and translating that to the organization's strategy, we have opportunities for failure. And I'm kind of the evangelist, saying, "Here's what we can do," and the visionary who says, "OK, how do we gather people together to look at this common issue?" And I play the role of devil's advocate. I say "What if . . ." a lot.

**What are your long-term goals for your institution?** We want to keep the organization viable. So we're looking at what we need to do and how we can cost-effectively put in IT to support that. There are some reimbursement models the government is looking at, and we're looking at what the implications will be and what we'll need to change so we're prepared for those changes when they come.

**How do you see IT transforming healthcare?** Technology can help us put the information that the clinicians need where they need it in a format that is standard. Right now, it's kind of like me being from the South; when you hear me talk, you know I'm from the South. The way clinicians talk is local too. We need to get to that standard language so if we're talking about a blood test, it doesn't matter if it's done here or in San Diego. And one thing technology can do is help us create that standardization so we can share that information. And I think technology will allow us to get a better handle on what the scientific-evidence-based best practices are that we can roll out in a timely manner, and using that data to figure out what's the best approach for this treatment for this patient.

**You wrote that U.S. healthcare lags behind that of many other countries in terms of use of IT. Why?** If you look at the countries that are ahead of us, they're much smaller and the population isn't that genetically different. But when you look at the U.S., there's a vast difference between New York and Los Angeles and Chicago and Miami. We're a vast melting pot, and that makes delivery of healthcare very different. And there are places — in rural Nebraska and Ohio, for example — that don't even have broadband, so some of our infrastructure just isn't there.

The other thing is, we don't have the tendency for the government to step in and do these things, and I'm not sure that's appropriate. But if you look at Denmark, the way it's funded, the government is doing it. We have some of the best healthcare on the planet, but [as for] getting it rolled out to all our population, that's not necessarily true. It's the same thing with technology.

**How would you grade your institution in terms of using IT to its fullest potential?** The biased answer is, I think we get an A. The unbiased answer is, I think we get a B+. We have not been able to afford everything we want, but that has forced us to be more innovative and creative. And some of what we've done has been used and cloned by other organizations. We try to do everything we can with what we have, and we try to engage as many people as we can. We're not on the bleeding edge, but in some cases I think we've been leading a little bit. I've got a great team that has a long history in this organization and in the profession.

**What can other healthcare institutions learn from your IT work at Good Samaritan?** The one thing I tell all the folks I talk to is, you have to learn to listen better. I never go into a meeting and think I have the best solution. I have an idea, but it takes a collaborative effort from all aspects of all people providing care to come up with the best solution.

You can't listen to what you're being told if you're trying to formulate a rebuttal. That's my bag of tricks — hear to listen.

— *Interview by* Computerworld *contributing writer* **Mary K. Pratt** *(marykpratt@verizon.net)*

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# SNW SNIA COMPUTERWORLD BEST PRACTICES AWARDS PROGRAM

SNW, in conjunction with *Computerworld* and the Storage Networking Industry Association (SNIA), proudly presents the SNW "Best Practices" Awards, honoring IT user case studies selected from a field of qualified finalists.

## 2011 FINALISTS

The Awards ceremony takes place on Wednesday, April 6 at 9:30am. Winners will be announced from the following finalists:

### Best Practices in Adopting Emerging and Innovative Technologies

**California Emergency Management Agency (Cal EMA)** | Mather, California

**District of Columbia Water and Sewer Authority (DC Water)** | Washington, DC

**International Justice Mission** | Arlington, Virginia

**Rockford Construction** | Grand Rapids, Michigan

**U.S. Customs & Border Protection, Office of Information and Technology** | Springfield, Virginia

### Best Practices in IT Consolidation, IT Efficiency and Data Center Design

**The Chinese University of Hong Kong** | Hong Kong, China

**Department of Innovation, Industry, Science and Research (DIISR)** | South Melbourne, Australia

**The E.W. Scripps Company** | Cincinnati, Ohio

**O.C. Tanner Company** | Salt Lake City, Utah

**Reliance Communications Ltd.** | Maharashtra, India

### Best Practices in Storage Resiliency, Data Protection and Recovery

**Arnold Worldwide** | Boston, Massachusetts

**Cloudmark** | San Francisco, California

**Escondido Union High School District** | Escondido, California

**Farm Credit Services of Mid-America** | Louisville, Kentucky

**FICO** | St. Paul, Minnesota

### Best Practices in Virtualization and Cloud Computing

**The Aura Group** | Fullerton, California

**Bloomington School District #87** | Bloomington, Illinois

**High Moon Studios** | Carlsbad, California

**Patients First Health Care** | Washington, Missouri

**United Way of Atlanta** | Atlanta, Georgia

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**Derek Hulitzky** | IDG Enterprise
**Lucas Mearian** | *Computerworld*
**David Stevens** | Carnegie Mellon University
**Terry Yoshii** | Intel Corporation

# 25TH ANNUAL SALARY 2011 SURVEY

*IT employees are growing* **increasingly dissatisfied** *with their pay yet continue to* **ratchet up productivity.** *Our survey of nearly 5,000 IT workers shows why they're at the* **breaking point.**


**18** **IT pay by the numbers.** See salary and bonus figures for over 40 job titles, plus data by region and industry. Other metrics show trends in workloads, job satisfaction and more.

**23** **More work? Bring it on!** Some people bristle at the thought of taking on added tasks, but these IT pros welcome the chance to learn new skills and showcase their talents.

**26** **Don't get stuck in a career rut.** If you feel trapped in a cash-strapped industry, company or city, be on the lookout for signs that it might be time to move on.


**ONLINE:** Check out our online interactive tool to see compensation data for more than 50 IT titles. **computerworld.com/11/salaries**

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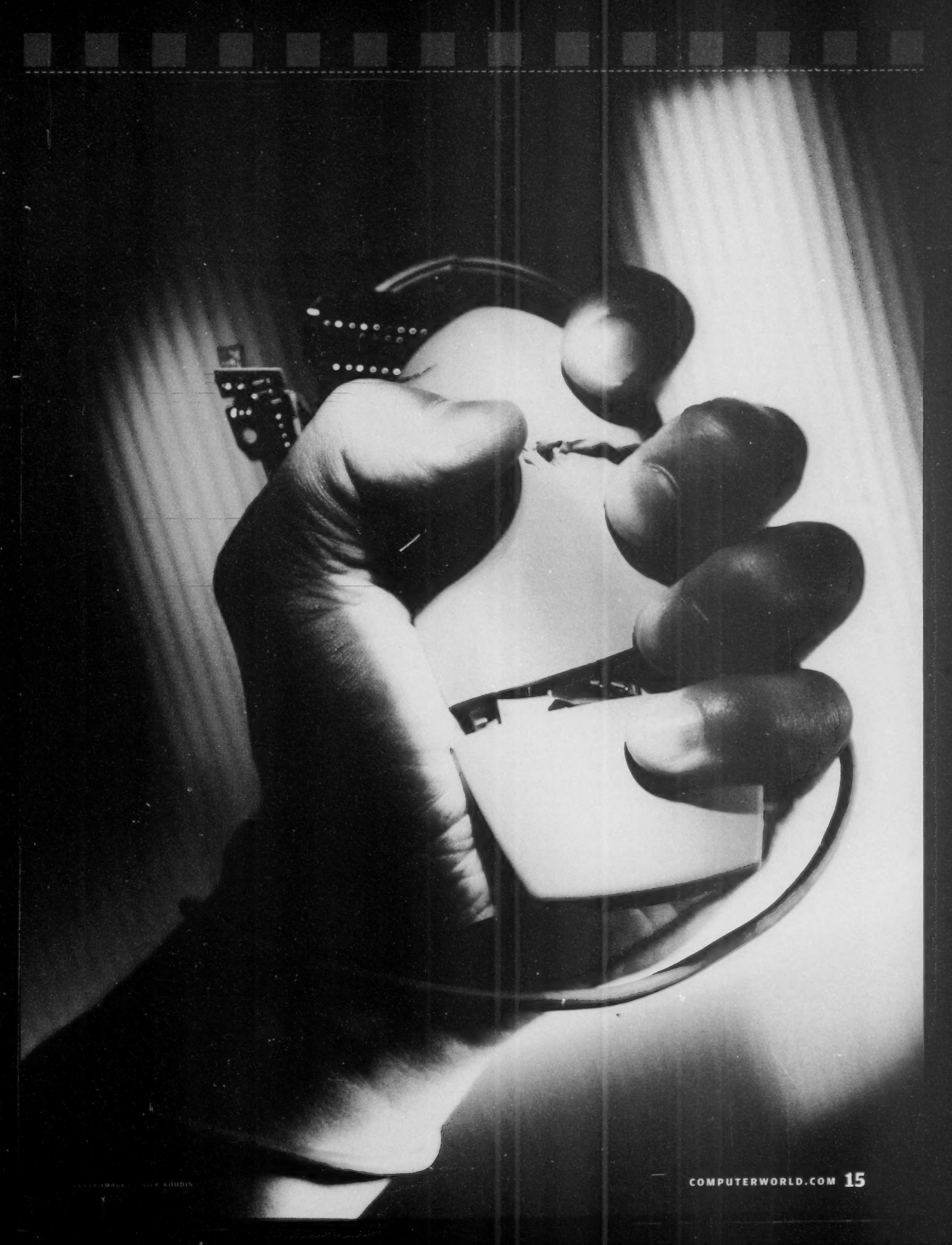
# UNDER PRESSURE & UNDERPAID

*The economy is* **strengthening,** *yet IT satisfaction is* **declining.** *Here's why IT workers are feeling the strain.*

**BY MARY BRANDEL**

**WHO COULDN'T USE** some good news these days? John Arnold, CIO at FedMed, a healthcare financial services organization in Rockville, Md., is ready for some. Four years ago, his IT staff was downsized from 14 employees to four, and they have experienced the familiar squeeze of salary freezes and increased workloads. Since then, business has stabilized, and an acquisition last year injected new energy in the form of interesting projects, better benefits and the promise of new growth, Arnold says. But he and his staff don't want to wait much longer for that energy to material-



ize into tangibles like raises and the go-ahead to hire more people.

So far, he says, camaraderie, loyalty and a strong sense of purpose, not to mention a dearth of employment opportunities, have kept the team together. "But if the company starts booming as a result of the acquisition and we don't see an adjustment in compensation, there will start to be some issues," Arnold says.

Many IT professionals share Arnold's frame of mind. And while there's reason to be hopeful, according to *Computerworld*'s 2011 Salary Survey, the skies still haven't completely cleared. Our survey shows that increases in total average compensation, salaries and bonuses are all higher this year than they were in 2010. Respondents reported that total average compensation (including salary and bonus) is up 1.4%, whereas the increase reported in the 2010 survey was just 0.1%. Likewise, this year's survey shows an overall 1.5% salary increase and a 0.3% increase in bonuses, while the 2010 survey found a 0.7% increase in salaries and a 6.6% drop in bonuses.

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Other findings indicate that IT professionals are growing impatient. Even with the uptick in pay, satisfaction with total compensation in relation to job responsibilities has decreased: In our 2010 survey, 55% of the respondents said they were "very satisfied" or "satisfied" in that regard, but the percentage of respondents choosing one of those answers fell to 50% this year.

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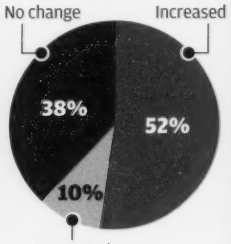
**How has your base salary changed from one year ago?**

(BASE: 4,852 RESPONDENTS)




**Average increase: 5.6%**
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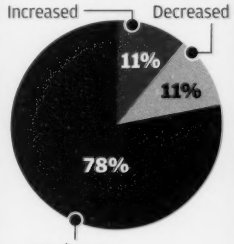


**Average increase: 39.4%**
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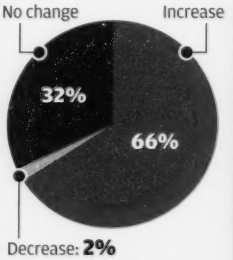
*How do you expect your workload and responsibilities to change over the next 12 months?*




BASE: 4,845 RESPONDENTS

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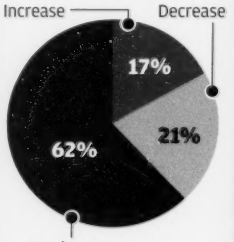


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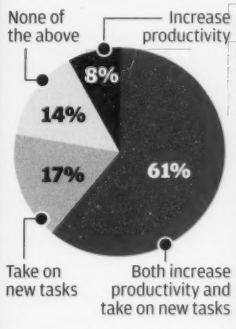


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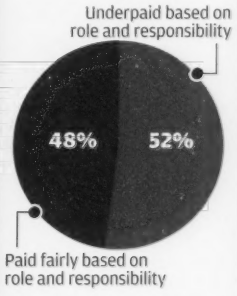


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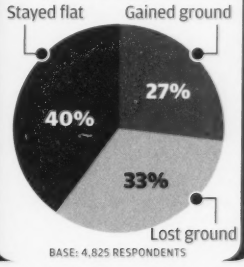


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Overall, 48% of the respondents reported that their base salary stayed the same or decreased from a year ago. Among those respondents, 62% said they've been affected by a salary freeze. It's no wonder then, that 40% reported feeling that they've plateaued financially over the past two years, and 33% said that they've lost ground. Only 27% reported gaining ground financially. Asked if they think they are paid fairly, more than half (52%) said they feel underpaid in light of their roles and responsibilities.

That may be due to the fact that 86% said that they have felt more pressure to increase productivity, take on new tasks or both. That can affect morale, even for those who consider themselves to be well paid — especially if they've seen others get laid off. "As the layoffs continue, only those who can prove their worth can feel relatively safe," says a systems engineer at a U.S. telecom giant. That state of affairs has created a politicized atmosphere in which self-promotion is a survival tool. "It's a sign of tough times when you have to think about sacrificing your ethics not just to get ahead, but to simply survive," he says.

The systems engineer believes the situation may improve only when business picks up and management has to offer bonuses to keep people from leaving the company. "I believe those times for us may be on the horizon," he says.

Others agree that that type of pressure will help correct the balance of compensation and workload. Indeed, a senior manager at AT&T says management won't see the light until there is "a significant decrease in the experienced workforce" as a result of people retiring or moving on to new jobs at other companies.

He expects tensions to rise as people with flat salaries and increased workloads become aware of the discrepancy in total compensation between lower and upper management — and see higher-value work go to contractors. And even with offers of higher pay, it may be difficult to entice employees who leave to come back as contractors, the senior manager says, because of "the stress and resentment currently being experienced by these workers in the current environment."

Tom Silver, Dice's senior vice president for North America, reports that about 40% of IT professionals say the way to earn more money is to move to another employer. That seems to indicate that people sense that the job market has more opportunities these days. Indeed, the No. 1 career concern among Dice survey respondents is no longer the possibility that their positions could be eliminated (just 15% chose that response, down from 25% last year); rather, it's the desire to find appropriate positions for their skill sets. "If people are no longer afraid of their position being eliminated, that gives them more confidence to move to another job," Silver says.

Some people switch jobs not for a pay increase but for security, better benefits or a less stressful business climate. For example, one CIO moved from a struggling bank to a smaller one that's profitable but pays 9% less and doesn't offer senior management bonuses. "Years ago, I just chased salary," he says. "But in the 'new economy,' I look for different attributes in a career." ◆

**Brandel** *is a* Computerworld *contributing writer. You can contact her at marybrandel@verizon.net.*

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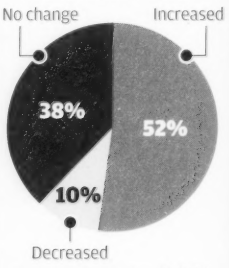


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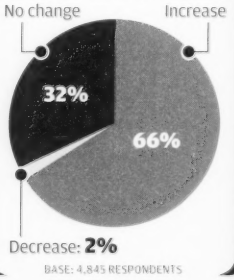


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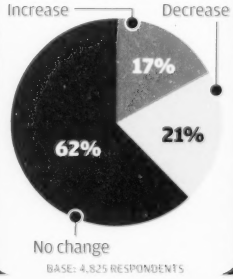


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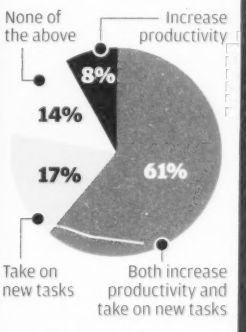


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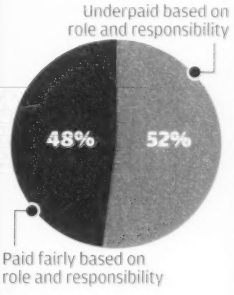


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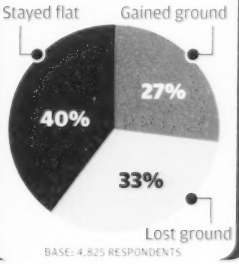


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my workload and what's expected of me has increased, though my salary has been flat for three years and bonuses were down to zero from about $6,000 the prior year, which was also down from the prior year," he says. Meanwhile, employees must contribute more to health insurance, and other benefits have been cut.

Overall, 48% of the respondents reported that their base salary stayed the same or decreased from a year ago. Among those respondents, 62% said they've been affected by a salary freeze. It's no wonder then, that 40% reported feeling that they've plateaued financially over the past two years, and 33% said that they've lost ground. Only 27% reported gaining ground financially. Asked if they think they are paid fairly, more than half (52%) said they feel underpaid in light of their roles and responsibilities.

That may be due to the fact that 86% said that they have felt more pressure to increase productivity, take on new tasks or both. That can affect morale, even for those who consider themselves to be well paid — especially if they've seen others get laid off. "As the layoffs continue, only those who can prove their worth can feel relatively safe," says a systems engineer at a U.S. telecom giant. That state of affairs has created a politicized atmosphere in which self-promotion is a survival tool. "It's a sign of tough times when you have to think about sacrificing your ethics not just to get ahead, but to simply survive," he says.

The systems engineer believes the situation may improve only when business picks up and management has to offer bonuses to keep people from leaving the company. "I believe those times for us may be on the horizon," he says.

Others agree that that type of pressure will help correct the balance of compensation and workload. Indeed, a senior manager at AT&T says management won't see the light until there is "a significant decrease in the experienced workforce" as a result of people retiring or moving on to new jobs at other companies.

He expects tensions to rise as people with flat salaries and increased workloads become aware of the discrepancy in total compensation between lower and upper management — and see higher-value work go to contractors. And even with offers of higher pay, it may be difficult to entice employees who leave to come back as contractors, the senior manager says, because of "the stress and resentment currently being experienced by these workers in the current environment."

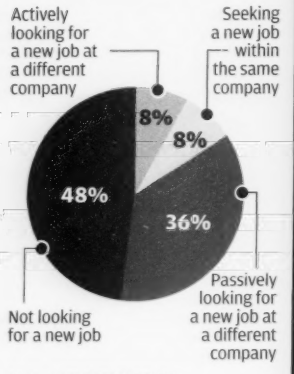
Tom Silver, Dice's senior vice president for North America, reports that about 40% of IT professionals say the way to earn more money is to move to another employer. That seems to indicate that people sense that the job market has more opportunities these days. Indeed, the No. 1 career concern among Dice survey respondents is no longer the possibility that their positions could be eliminated (just 15% chose that response, down from 25% last year); rather, it's the desire to find appropriate positions for their skill sets. "If people are no longer afraid of their position being eliminated, that gives them more confidence to move to another job," Silver says.

Some people switch jobs not for a pay increase but for security, better benefits or a less stressful business climate. For example, one CIO moved from a struggling bank to a smaller one that's profitable but pays 9% less and doesn't offer senior management bonuses. "Years ago, I just chased salary," he says. "But in the 'new economy,' I look for different attributes in a career." ◆

**Brandel** *is a* Computerworld *contributing writer. You can contact her at marybrandel@verizon.net.*

### IN THE MARKET

*Which one of the following best describes your job search status?*


Actively looking for a new job at a different company
8%
Seeking a new job within the same company
8%
48%
36%
Not looking for a new job
Passively looking for a new job at a different company

BASE: 4,852 RESPONDENTS

### CASH IS KING

*Here's what job hunters say they're looking for:*

| | |
|---|---|
| Higher compensation | 65% |
| Career opportunities | 46% |
| More personal fulfillment | 44% |
| More interesting/ challenging work | 44% |
| More responsibility | 25% |
| Less stress | 23% |
| More job stability | 22% |
| A better personal/ family situation | 21% |
| A more stable company | 20% |
| Security from layoffs | 19% |

BASE: 2,501 RESPONDENTS; MULTIPLE RESPONSES ALLOWED

### STICKING AROUND

*The top reasons these respondents* **aren't** *looking for a new job:*

| | |
|---|---|
| Satisfied with current job responsibilities | 63% |
| Satisfied with company culture | 46% |
| Satisfied with current compensation | 45% |
| Job market is poor/ few opportunities | 40% |
| Other | 13% |

BASE: 2,328 RESPONDENTS; MULTIPLE RESPONSES ALLOWED

## Senior Management Positions

| JOB TITLE | AVERAGE SALARY | AVERAGE BONUS | 2011 TOTAL | 2010 TOTAL | CHANGE |
|---|---|---|---|---|---|
| CIO/vice president of IT | $154,159 | $28,238 | $182,397 | $176,126 | 3.6% |
| Chief security officer | $131,280 | $30,800 | $162,080 | $159,025 | 1.9% |
| Chief technology officer | $146,127 | $24,458 | $170,585 | $168,310 | 1.4% |
| Director of IT operations | $109,713 | $10,089 | $119,802 | $117,544 | 1.9% |
| Director of systems development | $147,397 | $28,001 | $175,398 | $169,977 | 3.2% |
| Internet technology strategist | $134,279 | $14,313 | $148,592 | $146,287 | 1.6% |

## Middle Management Positions

| | | | | | |
|---|---|---|---|---|---|
| Application development manager | $102,315 | $8,638 | $110,953 | $109,734 | 1.1% |
| Communications manager | $84,208 | $6,546 | $90,754 | $93,444 | -2.9% |
| Computer operations manager | $98,717 | $5,869 | $104,586 | $105,940 | -1.3% |
| Database manager/ data warehousing manager | $111,256 | $5,503 | $116,759 | $115,623 | 1.0% |
| E-commerce/ Internet manager | $80,623 | $3,857 | $84,480 | $82,448 | 2.5% |
| Help desk/ tech support manager | $71,872 | $3,491 | $75,363 | $74,874 | 0.7% |
| Information security manager | $90,812 | $8,219 | $99,031 | $96,983 | 2.1% |
| IT manager | $88,051 | $5,924 | $93,975 | $93,126 | 0.9% |
| Network manager | $84,346 | $6,157 | $90,503 | $88,776 | 1.9% |
| Product manager | $113,221 | $14,895 | $128,116 | $122,256 | 4.8% |
| Project manager | $94,197 | $8,169 | $102,366 | $102,068 | 0.3% |

## Staff and Entry-Level Positions

| | | | | | |
|---|---|---|---|---|---|
| Business intelligence analyst | $76,168 | $3,050 | $79,218 | $81,319 | -2.6% |
| Communications specialist | $71,602 | $5,560 | $77,162 | $74,731 | 3.3% |

### HOLISTIC WORKER

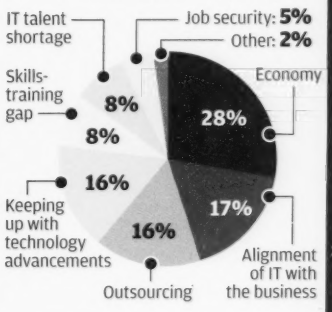
*Only 8% of respondents said they wouldn't consider changing jobs for any reason. But of those who would, these are the top five enticements:*

| | |
|---|---|
| **1.** Salary increase | **78%** |
| **2.** Work/life balance | **39%** |
| **3.** Job security | **38%** |
| **4.** Access to new tech | **33%** |
| **5.** More vacation time | **31%** |

BASE: 4,826 RESPONDENTS; MULTIPLE RESPONSES ALLOWED

### ECONOMIC WORRIES

*What's the biggest challenge facing workers in the IT industry today?*




BASE: 4,834 RESPONDENTS

### BUDGET AUSTERITY

*The top factors affecting working conditions:*

| | |
|---|---|
| Budget cuts | **55%** |
| Increased workload (due to staff cuts) | **52%** |
| Salary freeze | **45%** |
| Hiring freeze | **39%** |
| Permanent staff layoffs | **36%** |
| Training cuts | **30%** |
| Canceled project(s) | **25%** |
| Increased outsourcing | **21%** |
| Contract staff layoffs | **17%** |
| Salary cuts | **13%** |
| Merger/acquisition | **13%** |
| Contract/consultant hires | **11%** |
| Unpaid work furloughs | **8%** |
| Increased hiring/staffing | **5%** |
| Decreased outsourcing | **3%** |

BASE: 4,025 RESPONDENTS; MULTIPLE RESPONSES ALLOWED

## Staff and Entry-Level Positions

| JOB TITLE | AVERAGE SALARY | AVERAGE BONUS | 2011 TOTAL | 2010 TOTAL | CHANGE |
|---|---|---|---|---|---|
| Computer operator/ lead operator | $52,218 | $1,594 | $53,812 | $52,599 | 2.3% |
| Database administrator | $86,808 | $2,508 | $89,316 | $88,700 | 0.7% |
| Database analyst | $72,482 | $3,375 | $75,857 | $71,776 | 5.7% |
| Database architect/ developer | $92,998 | $6,548 | $99,546 | $99,229 | 0.3% |
| Help desk/tech support specialist | $52,834 | $3,343 | $56,177 | $56,249 | -0.1% |
| Information security specialist | $82,905 | $6,183 | $89,088 | $87,100 | 2.3% |
| Network administrator | $63,073 | $1,076 | $64,149 | $63,114 | 1.6% |
| Network engineer/ wireless network engineer | $79,937 | $5,170 | $85,107 | $84,048 | 1.3% |
| Programmer/ analyst | $74,160 | $2,793 | $76,953 | $75,790 | 1.5% |
| Project leader | $85,867 | $5,178 | $91,045 | $91,779 | -0.8% |
| Quality assurance specialist | $74,151 | $4,150 | $78,301 | $76,223 | 2.7% |
| Software developer | $81,110 | $2,967 | $84,077 | $82,625 | 1.8% |
| Software engineer | $96,461 | $5,359 | $101,820 | $99,858 | 2.0% |
| Systems analyst | $71,982 | $2,685 | $74,667 | $73,330 | 1.8% |
| Senior systems analyst | $87,948 | $4,421 | $92,369 | $94,984 | -2.8% |
| Storage administrator/ architect | $89,876 | $5,679 | $95,555 | $93,121 | 2.6% |
| Systems administrator | $67,963 | $2,384 | $70,347 | $69,097 | 1.8% |
| Systems architect | $102,642 | $8,940 | $111,582 | $110,014 | 1.4% |
| Systems programmer | $88,159 | $3,446 | $91,605 | $90,252 | 1.5% |
| Technical trainer | $61,407 | $3,254 | $64,661 | $64,068 | 0.9% |
| Technician | $49,527 | $1,556 | $51,083 | $50,718 | 0.7% |
| Technology/business systems analyst | $76,861 | $4,361 | $81,222 | $81,550 | -0.4% |
| Web developer | $66,887 | $5,127 | $72,014 | $72,405 | -0.5% |
| Webmaster | $52,433 | $89 | $52,522 | $52,057 | 0.9% |

# A Sampling of Average Total Compensation by Region

| JOB TITLE | New England | Middle Atlantic | South Atlantic | North Central | South Central | Mountain | Pacific |
|---|---|---|---|---|---|---|---|
| CIO/vice president of IT | $236,750 | $214,469 | $205,437 | $165,351 | $159,554 | $161,842 | $160,655 |
| Director of IT | $119,764 | $137,791 | $115,191 | $110,348 | $110,082 | $110,907 | $139,930 |
| IT manager | $100,979 | $99,964 | $95,279 | $88,562 | $89,345 | $82,710 | $106,469 |
| Systems administrator | $79,362 | $68,148 | $73,699 | $68,678 | $67,970 | $75,134 | $76,818 |
| Help desk/tech support specialist | $53,121 | $71,701 | $58,476 | $50,896 | $55,260 | $54,193 | $57,928 |
| Project manager | $101,354 | $114,586 | $123,126 | $100,642 | $89,172 | $93,352 | $104,477 |
| Programmer/analyst | $81,489 | $95,518 | $86,713 | $71,077 | $74,008 | $75,087 | $79,062 |
| Technology/business systems analyst | $87,125 | $96,289 | $84,423 | $71,480 | $59,942 | $87,531 | $88,244 |
| Network administrator | $69,276 | $69,263 | $63,245 | $57,848 | $61,301 | $72,210 | $72,383 |
| Software engineer | $108,890 | $105,385 | $100,745 | $101,239 | $106,324 | $91,547 | $116,259 |
| Application development manager | $117,985 | $99,050 | $108,507 | $119,740 | $111,945 | $104,857 | $116,366 |
| Network engineer | $93,944 | $93,227 | $83,693 | $83,446 | $80,639 | $89,484 | $104,640 |

**RED TEXT:** The total base for this job title in this particular region was fewer than 30 responses but more than 15. These figures should be used for comparison only, because they don't constitute a statistically significant sampling.

**GREEN TEXT:** The total base for this job title in this particular region was fewer than 16 responses but more than nine. These figures should be used for comparison only.

**REGIONS**

**New England:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

**Middle Atlantic:** New Jersey, New York, Pennsylvania

**South Atlantic:** Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia

**North Central:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

**South Central:** Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas

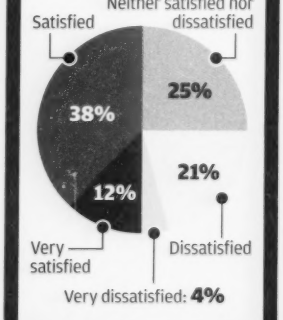
**Mountain:** Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming

**Pacific:** Alaska, California, Hawaii, Oregon, Washington

# Satisfaction Meter

## MONEY

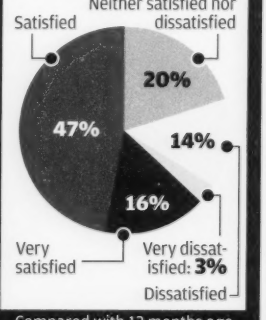
*How satisfied are you with your total compensation package?*




| Compared with 12 months ago: | |
|---|---|
| More satisfied | 19% |
| Less satisfied | 19% |
| The same | 62% |

## CURRENT JOB

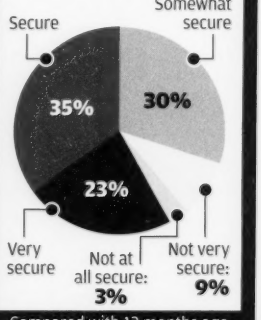
*How satisfied are you with your current job?*




| Compared with 12 months ago: | |
|---|---|
| More satisfied | 22% |
| Less satisfied | 16% |
| The same | 59% |
| Not in the same position | 3% |

## SECURITY

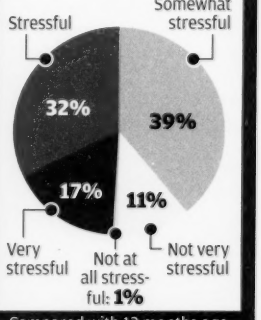
*How secure do you feel your job is?*




| Compared with 12 months ago: | |
|---|---|
| More secure | 22% |
| Less secure | 17% |
| The same | 58% |
| Not in the same position | 3% |

## STRESS

*How stressful is your job?*




| Compared with 12 months ago: | |
|---|---|
| More stressful | 17% |
| Less stressful | 22% |
| The same | 58% |
| Not in the same position | 3% |

BASE FOR ALL SATISFACTION CHARTS: 4,852 RESPONDENTS

# A Sampling of Average Total Compensation by Industry

### CIO/vice president of IT

Computer services/consulting
**$170,779**

Banking
**$138,703**

Manufacturing (noncomputer)
**$201,322**

Education
**$177,544**

Healthcare
**$188,370**

Legal/insurance/real estate
**$207,938**

Wholesale trade
**$189,173**

Government
**$117,296**

### Director of IT

Education
**$99,767**

Healthcare
**$119,157**

Manufacturing (noncomputer)
**$116,793**

Government
**$97,740**

Computer services/consulting
**$135,768**

Legal/insurance/real estate
**$113,288**

Retail trade
**$136,038**

Entertainment/marketing/advertising
**$120,563**

### IT manager

Manufacturing (noncomputer)
**$93,933**

Government
**$87,293**

Education
**$81,993**

Healthcare
**$78,520**

Computer services/consulting
**$112,030**

Legal/insurance/real estate
**$107,673**

Energy/utilities
**$100,996**

Retail trade
**$103,115**

### Project manager

Computer services/consulting
**$99,664**

Manufacturing (noncomputer)
**$121,839**

Government
**$89,816**

Defense/aerospace
**$117,552**

Healthcare
**$90,069**

Telecommunications
**$97,278**

Education
**$75,245**

Energy/utilities
**$111,622**

### Help desk/tech support specialist

Education
**$44,535**

Manufacturing (noncomputer)
**$65,909**

Computer services/consulting
**$56,904**

Government
**$75,245**

Healthcare
**$46,357**

Finance/accounting
**$58,008**

Legal/insurance/real estate
**$53,666**

Entertainment/marketing/advertising
**$44,190**

### Technology/business systems analyst

Computer services/consulting
**$93,996**

Manufacturing (noncomputer)
**$72,444**

Healthcare
**$62,967**

Government
**$78,231**

Legal/insurance/real estate
**$92,280**

Education
**$61,254**

### Network administrator

Education
**$54,853**

Manufacturing (noncomputer)
**$62,089**

Government
**$68,850**

Education
**$54,853**

Healthcare
**$66,839**

Computer services/consulting
**$71,767**

### Network engineer

Telecommunications
**$80,433**

Computer services/consulting
**$79,621**

Healthcare
**$79,869**

Education
**$68,805**

Manufacturing (noncomputer)
**$75,076**

Government
**$78,517**

### Programmer/analyst

Government
**$79,459**

Legal/insurance/real estate
**$85,684**

Computer services/consulting
**$78,650**

Education
**$55,774**

Manufacturing (noncomputer)
**$72,391**

Healthcare
**$78,788**

### Software engineer

Computer services/consulting
**$101,471**

Manufacturing (computer)
**$102,687**

Defense/aerospace
**$110,438**

Healthcare
**$108,505**

Government
**$94,419**

### Systems administrator

Education
**$57,187**

Computer services/consulting
**$63,671**

Government
**$70,707**

Manufacturing (noncomputer)
**$72,375**

Healthcare
**$69,226**

Legal/insurance/real estate
**$79,021**

Entertainment/marketing/advertising
**$70,574**

Energy/utilities
**$77,166**

### Systems analyst

Healthcare
**$68,856**

Government
**$65,412**

Legal/insurance/real estate
**$81,196**

Computer services/consulting
**$71,282**

Education
**$61,084**

Manufacturing (noncomputer)
**$76,842**

**RED TEXT:** The total base for this job title in this particular industry was fewer than 30 responses but more than 15. These figures should be used for comparison only, because they don't constitute a statistically significant sampling.

**GREEN TEXT:** The total base for this job title in this particular industry was fewer than 16 responses but more than nine. These figures should be used for comparison only.

# JOEL CAPPERELLA

## Prepare Your Workforce For Economic Prosperity

**DESPITE THE SLIGHT RISE** in overall compensation revealed by *Computerworld*'s 2011 Salary Survey, most IT pros feel that their salaries have remained stagnant or even decreased over the past two years. These sentiments are, perhaps not surprisingly, compounded by feelings of increased pressure to perform and could lead to significant turnover as the economy improves. So, how bad might it get for employers?

Anecdotally, Yoh has recently been increasingly successful courting candidates away from full-time opportunities in favor of temporary assignments. The draw is rarely more money, but rather the opportunity to gain experience and establish oneself in a new role at a new employer. Candidates also see less risk with these assignments because of the way the temporary job market has performed over the past 12 months.

What, then, is the prescription for an organization that has squeezed as much productivity out of its workforce as possible while keeping labor-related expenses under control? How can it stem or prepare for an emigration of talent?

**Send reinforcements.** Evaluating productivity against current staffing is essential in determining where the pressure points are across your workforce. Telltale signs that your staff might be in need of help include flattening productivity numbers over the past six months and poor or decreasing retention. If these factors involve projects that are crucial to overall business operations, staff augmentation must be considered.

**Accelerate project timelines.** Tech workers want to keep their skills sharp and expand their experience. Satisfying this desire can help alleviate feelings of underappreciation and, in some cases, even undercompensation, as many tech professionals realize that gaining new skills will eventually lead to financial benefits.

Start by mixing up the project portfolio. Accelerate pending projects and shuffle teams to reward high performers with an opportunity to work on the most forward-leaning efforts. Develop cross-functional teams that oversee elements of existing projects. Encourage employees to brainstorm new and creative ways to speed delivery or improve quality. Most important, help them see the value in the skills they will gain from the new work or from the new approach being taken to address ongoing problems.

**Eliminate isolated tactics.** The first two suggestions assume that you'll be making larger investments in the workforce. That's nearly unavoidable. What is avoidable, however, is overspending. Cost efficiency requires that three areas of the business — human resources, business leadership and procurement — work together as never before.

Keeping hiring efforts isolated will prevent the organization from strategically identifying where staff increases are most needed in order to boost overall workforce satisfaction and productivity. Isolated instances of hiring will also make it difficult to establish a standard contract-to-permanent employment process that will ultimately boost the company's reputation as an employer.

Inevitably, you must make investments in your workforce in order to advance the business objectives of today and tomorrow. Doing so in this economic climate doesn't have to induce hand-wringing. Focusing squarely on the overall health of the workforce while creating a plan to drive the most strategic projects to completion will increase employee satisfaction and prepare your organization for a strong recovery. ◆

Inevitably, you must make investments in your workforce to advance the business objectives of today and tomorrow.

**Joel Capperella** is vice president of Yoh, a talent and outsourcing services provider. Visit *www.yoh.com* or *http://blog.yoh.com*.

# IT SUPERHEROES

*More work?* **Bring it on!** *Where some see crushing workloads, these IT workers see* **opportunities** *to snag new projects and new skills.*

**BY MARY K. PRATT**

**KEVIN JOYCE** is taking on tasks that aren't usually given to a network manager.

He's part of a committee to make sure that his employer, St. Elizabeth Medical Center in Utica, N.Y., is prepared for a disaster. And he recently volunteered to be the IT representative on another hospitalwide committee, even though he's not yet sure of the committee's focus.

Joyce says he believes he has to step up to ensure that the organization is successful and to

GETTY IMAGES / PESKYMONKEY

help advance his own career.

"I think people recognize who's willing to take on extra projects, who's willing to volunteer," says Joyce, who wants to eventually move into management.

Joyce's situation isn't unique. Layoffs and hiring freezes have left many IT professionals with new tasks and additional responsibilities. While some might grumble about being overworked, the savvy ones are pushing past the negative vibes and learning to see opportunities in this rough economy. They're gaining new skills and raising their visibility as they take on roles that once would have gone to others.

"There is always opportunity in the midst of change in an organization. That's an important dynamic for people to know," says Karyl Innis, founder and CEO of The Innis Co., a Dallas-based career consulting firm.

Innis says the prospects for job growth are real, even if IT budgets are stressed and workloads are high. Companies still need to get on with technology projects, and employees who are willing to accept new responsibilities in order to get those projects done can advance their own careers in the process.

That's because these high-octane workers are able to build relationships, become experts in specific technologies and demonstrate leadership skills that they didn't have a chance to showcase during better economic times, Innis says.

## Taking the Long View

This isn't about working more hours, Innis notes.

"It's about making somebody's footprint wider and deeper," she explains. "The people who are plotting for their future are those people who tend to look at things big-picture and work toward the specifics. They're likely to be asking, 'Can I learn something here that I can use tomorrow?' "

Many IT workers are asking themselves that question. In *Computerworld*'s 2011 Salary Survey, 44% of the 4,852 IT professionals polled said that taking on new tasks in their current positions is the No. 1 way for them to advance their careers and earn more money.

Indeed, many IT workers are looking ahead to better opportunities: 40% of the respondents said that they expect to be promoted to a higher-level position five years from now.

Shannon Stoltz, a former techie who now works with IT departments as a consultant with Houston-based SheaKay Communications, says people who are capitalizing on opportunities in today's work environment will find themselves well positioned for advancement when the job market starts to expand.

"Opportunities come to those who show a good work ethic, are fulfilling their responsibilities and are demonstrating the ability and willingness to help the health of the organization," she says.

There's no question that having a "go get 'em" attitude right now will pay off when better times (with bigger budgets and bigger staffs) return, according to Stoltz.

"I've yet to see anyone who truly stepped up and played as a team player and put their organization and projects in front of their agenda stay in the same role for years, unless it's their choice," she says.

## Standouts in the Crowd

Mike Miller, director of information security at Media General in Richmond, Va., says he sees his IT workers taking on roles and responsibilities that they didn't have prior to the downturn. As a result, they're learning new and valuable skills; for example, some staff members were pulled in to work on the company's virtualization project.

Miller acknowledges that he hasn't been able to hand out big raises, but he hopes to provide more recognition when the economy recovers in earnest. He says he has already told one administrator who has shown management potential that he'll be in the running when a position opens up.

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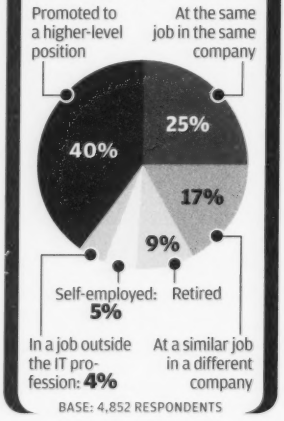
BASE: 4,852 RESPONDENTS

### ONWARD AND UPWARD

*Where do you expect to be in your career five years from now?*

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Job title and skills, however, are only part of what gets IT workers more money.

"Salaries are migrating up," says Robert Keefe, CIO of Mueller Water Products and past president of the Society for Information Management. But he says he's seeing companies reward IT workers who are willing to put in extra effort, by paying out project-based performance bonuses or bonuses for stepping in to fill gaps.

Also, IT workers are increasingly recognized and compensated not just for their technical prowess, but for their ability to help drive their organizations forward, says Karyl Innis, CEO of The Innis Co. What matters in this matrix is whether a person is willing to work hard, do what needs to be done, learn the business, work collaboratively with others and learn new skills to stay relevant.

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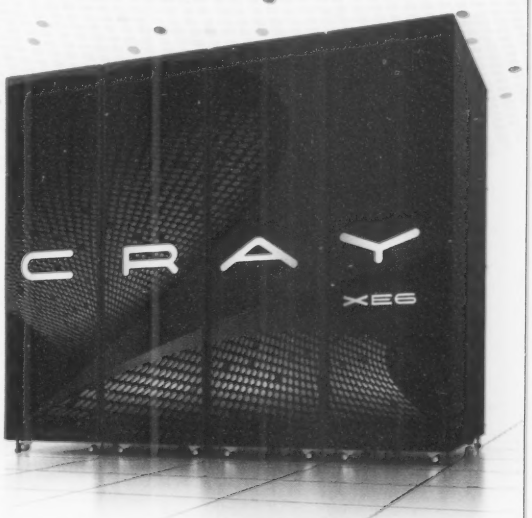


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help advance his own career.

"I think people recognize who's willing to take on extra projects, who's willing to volunteer," says Joyce, who wants to eventually move into management.

Joyce's situation isn't unique. Layoffs and hiring freezes have left many IT professionals with new tasks and additional responsibilities. While some might grumble about being overworked, the savvy ones are pushing past the negative vibes and learning to see opportunities in this rough economy. They're gaining new skills and raising their visibility as they take on roles that once would have gone to others.

"There is always opportunity in the midst of change in an organization. That's an important dynamic for people to know," says Karyl Innis, founder and CEO of The Innis Co., a Dallas-based career consulting firm.

Innis says the prospects for job growth are real, even if IT budgets are stressed and workloads are high. Companies still need to get on with technology projects, and employees who are willing to accept new responsibilities in order to get those projects done can advance their own careers in the process.

That's because these high-octane workers are able to build relationships, become experts in specific technologies and demonstrate leadership skills that they didn't have a chance to showcase during better economic times, Innis says.

## Taking the Long View

This isn't about working more hours, Innis notes.

"It's about making somebody's footprint wider and deeper," she explains. "The people who are plotting for their future are those people who tend to look at things big-picture and work toward the specifics. They're likely to be asking, 'Can I learn something here that I can use tomorrow?' "

Many IT workers are asking themselves that question. In *Computerworld*'s 2011 Salary Survey, 44% of the 4,852 IT professionals polled said that taking on new tasks in their current positions is the No. 1 way for them to advance their careers and earn more money.

Indeed, many IT workers are looking ahead to better opportunities: 40% of the respondents said that they expect to be promoted to a higher-level position five years from now.

Shannon Stoltz, a former techie who now works with IT departments as a consultant with Houston-based SheaKay Communications, says people who are capitalizing on opportunities in today's work environment will find themselves well positioned for advancement when the job market starts to expand.

"Opportunities come to those who show a good work ethic, are fulfilling their responsibilities and are demonstrating the ability and willingness to help the health of the organization," she says.

There's no question that having a "go get 'em" attitude right now will pay off when better times (with bigger budgets and bigger staffs) return, according to Stoltz.

"I've yet to see anyone who truly stepped up and played as a team player and put their organization and projects in front of their agenda stay in the same role for years, unless it's their choice," she says.

## Standouts in the Crowd

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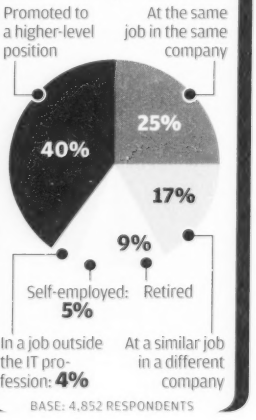


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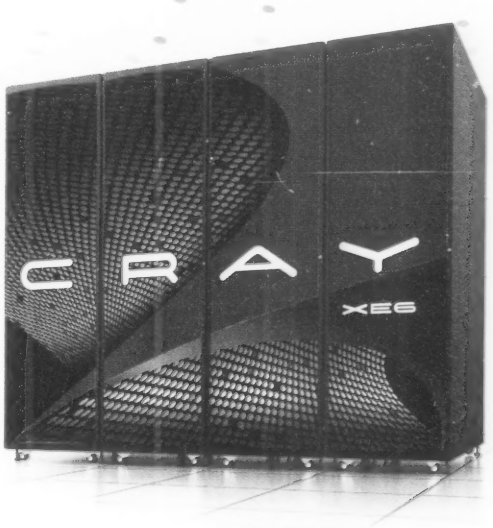


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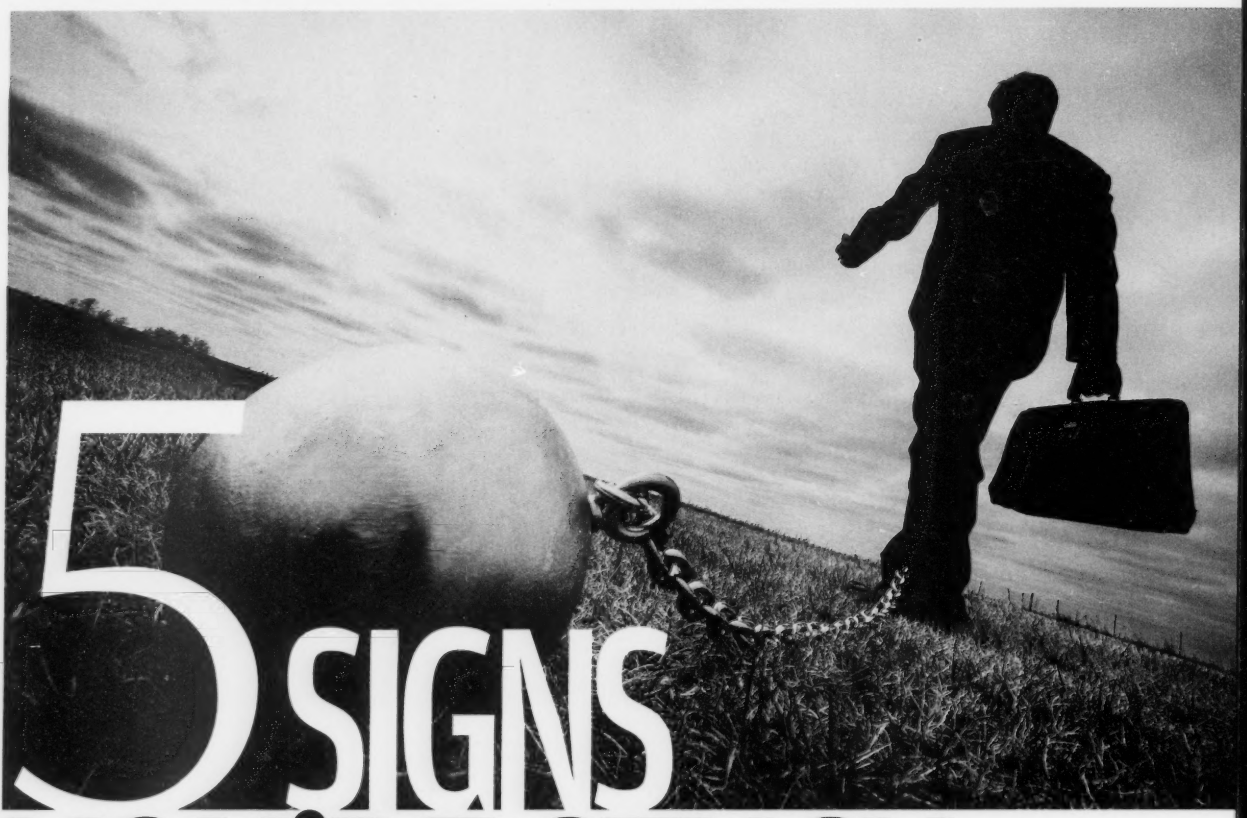

# 5 SIGNS YOU'RE STUCK IN A RUT

*Some IT workers are* **caught** *in cash-strapped industries, companies or cities – but aren't* **budging.** *Experts explain when it's time to* **bounce.**

**BY STACY COLLETT**

**IN DECEMBER 2007,** a 49-year-old senior database administrator at a Chicago investment firm decided he couldn't take it anymore. Excessive hours and oppressive management had taken their toll; he was also worn down by the fear and uncertainty of a financial crisis that threatened even the most revered institutions. His career was officially in a rut.

"I decided I had to get out of the investment community because it was killing me," he says. Was his performance, the financial crisis or bad management to blame? With his 50th birthday around the corner, he recalls, "I said to myself, 'I'm only going to [go job hunting] one more time.' " He had to find the right fit.

*Continued on page 28*



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*Continued from page 26*

Today, many IT professionals are searching for the same answers. Should you stay in your current position? Ask for a raise? Move to a new city? In tough economic times, it's hard to tell whether your industry, your company or your own performance is to blame for your career woes. Here are five signs that will help you tell the difference.

## 1 YOU RECEIVE LOWER PAY INCREASES THAN YOUR CO-WORKERS

Even with limited budgets, more companies are paying to retain top performers. "They're not willing to give out an average pay increase for everybody to maintain everybody," says Lily Mok, an analyst at Gartner. "In our survey findings, top performers in IT can get a 4% increase compared to low performers, [who receive] zero or less than 1%."

What's more, companies have raised the bar for achieving "top performer" status. Over the past three to four years, the percentage of employees rated "below average" on performance reviews has tripled, according to a 2010 Mercer study of more than 1,100 organizations. "Many companies have implemented forced distributions of performance ratings," explains David Van De Voort, principal consultant in human capital for the HR consulting firm. "Managers are told that just X percent of their people should get the highest rating. We've seen more than 20% of the workforce moved out of being rated 'average' or 'meets expectations' and into the lower categories."

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But don't get too discouraged, Mok says. The problem could be temporary. "A low performance rating is not necessarily an indication of you personally, but relative to the rest of the organization," she explains.

## 2 YOU'RE NOT BEING TRAINED OR RESKILLED

Most companies that expect to rebound from difficult times want to keep employees' skills sharp. "If you're not getting trained, reskilled and refreshed, then you're certainly going to be sitting in a rut," or the business may not be expected to survive, says Diane Berry, a Gartner analyst specializing in IT workforce management and retention issues.

In fact, in lieu of pay raises and bonuses, many companies have created career management programs that help assure top performers that they are valued and encourage them to stay.

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### HOTTEST INDUSTRIES

*Largest average increases in total compensation:*

| | |
|---|---|
| Business services/ consulting (non-computer-related) | +2.8% |
| Hospitality/travel | +2.7% |
| Transportation/ logistics | +2.7% |
| Manufacturing (non-computer-related) | +2.6% |
| Defense/aerospace | +2.1% |

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| Denver | +2.7% |
| New York | +2.5% |
| Minneapolis/ St. Paul | +2.5% |
| St. Louis | +1.8% |
| Washington, D.C./ Virginia suburbs | +1.7% |

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### What You Can Do Right Now

If you feel like you're in a rut but you're reluctant to leave your current employer, there are other ways to reboot your career. "Look for assignments that stretch the boundaries of your current job," says Van De Voort.

For instance, the CIO gets requests all the time from department leaders asking for help with the IT functions on outside projects ranging from United Way campaigns to marketing initiatives. HR staff may come to IT asking for help with new policy development, or the finance department may need IT assistance with procedure and strategy development. "Make clear to your boss that you are interested in those cross-functional assignments," Van De Voort adds.

Regardless of your circumstances, the decision to stay put or move on is under your control.

Foote offers some tough love: "If you see yourself as a victim — of a boss, a company, a slow industry or the economic times — then you don't stand a chance. Others with your same skills are going to blow right by you," he says. Being in a rut, he adds, "is a state of mind that you can choose to have or not." People who see the glass as half full "will rent their house and put themselves in an international job search; some have even moved overseas. You've got to get up every morning, go to work and be happy with what you're doing. You have to take control of your career," says Foote.

The senior DBA from Chicago took that approach. Today he lives in Oklahoma and works as a DBA at an oil company. "I'm respected, have access to the greatest technology, and I'm compensated well," he says. He received a 13% bonus and expects a pay raise of about 10% later this month. He also enjoys flextime and access to lots of training. "I'm very happy," he adds, "and I'm here for the long haul." ◆

**Collett** *is a* Computerworld *contributing writer. You can contact her at stcollett@aol.com.*

## GETTING UNSTUCK

**So you live in a region of the country that isn't recovering fast enough for your liking. Should you move? The answer for most workers today is no.**

"People are not relocating," says Sheila Greco, president of Sheila Greco Associates. They either own homes that might be worth less today than what they paid for them, "or their spouse has a job that they feel good about," she says. But if a great opportunity comes along, it's worth weighing your options, Greco adds.

"One thing I'm telling IT people is that if you can get international experience, [do it]. If you have the opportunity to take on an international role, even if you only do that for a year or two, it will make you stand out," Greco says.

"Also, don't move sideways or relocate for a 5% pay increase," she adds. "But if it's 10% to 15%, take a look at it."

And telecommuting may not be the best option.

"Telecommuting is good for a while, but out of sight is out of mind," Greco says. "If you want to climb the ladder, you really have to play the game. You can be the best worker, but if you're not there, people don't know you."

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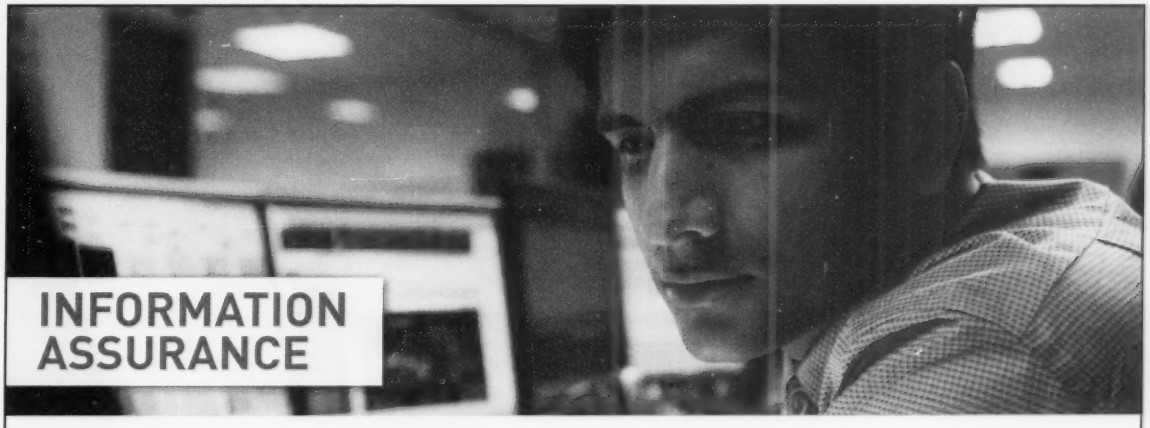


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"There are lots of opportunities in the service industry as a hybrid subject matter expert in lines of business or corporate departments, like IT HR, IT marketing or IT finance," says David Foote, president of Foote Partners. "Get a broader tool belt — that will give you possibilities."

### What You Can Do Right Now

If you feel like you're in a rut but you're reluctant to leave your current employer, there are other ways to reboot your career. "Look for assignments that stretch the boundaries of your current job," says Van De Voort.

### HOTTEST INDUSTRIES

*Largest average increases in total compensation:*

| | |
|---|---|
| Business services/ consulting (non-computer-related) | +2.8% |
| Hospitality/travel | +2.7% |
| Transportation/ logistics | +2.7% |
| Manufacturing (non-computer-related) | +2.6% |
| Defense/aerospace | +2.1% |

BASE: 4,852 RESPONDENTS

### HOTTEST METRO REGIONS

*Largest average increases in total compensation:*

| | |
|---|---|
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| New York | +2.5% |
| Minneapolis/ St. Paul | +2.5% |
| St. Louis | +1.8% |
| Washington, D.C./ Virginia suburbs | +1.7% |

BASE: 4,852 RESPONDENTS

For instance, the CIO gets requests all the time from department leaders asking for help with the IT functions on outside projects ranging from United Way campaigns to marketing initiatives. HR staff may come to IT asking for help with new policy development, or the finance department may need IT assistance with procedure and strategy development. "Make clear to your boss that you are interested in those cross-functional assignments," Van De Voort adds.

Regardless of your circumstances, the decision to stay put or move on is under your control.

Foote offers some tough love: "If you see yourself as a victim — of a boss, a company, a slow industry or the economic times — then you don't stand a chance. Others with your same skills are going to blow right by you," he says. Being in a rut, he adds, "is a state of mind that you can choose to have or not." People who see the glass as half full "will rent their house and put themselves in an international job search; some have even moved overseas. You've got to get up every morning, go to work and be happy with what you're doing. You have to take control of your career," says Foote.

The senior DBA from Chicago took that approach. Today he lives in Oklahoma and works as a DBA at an oil company. "I'm respected, have access to the greatest technology, and I'm compensated well," he says. He received a 13% bonus and expects a pay raise of about 10% later this month. He also enjoys flextime and access to lots of training. "I'm very happy," he adds, "and I'm here for the long haul." ◆

**Collett** *is a* Computerworld *contributing writer. You can contact her at stcollett@aol.com.*

## GETTING UNSTUCK

**So you live in a region of the country that isn't recovering fast enough for your liking. Should you move? The answer for most workers today is no.**

"People are not relocating," says Sheila Greco, president of Sheila Greco Associates. They either own homes that might be worth less today than what they paid for them, "or their spouse has a job that they feel good about," she says. But if a great opportunity comes along, it's worth weighing your options, Greco adds.

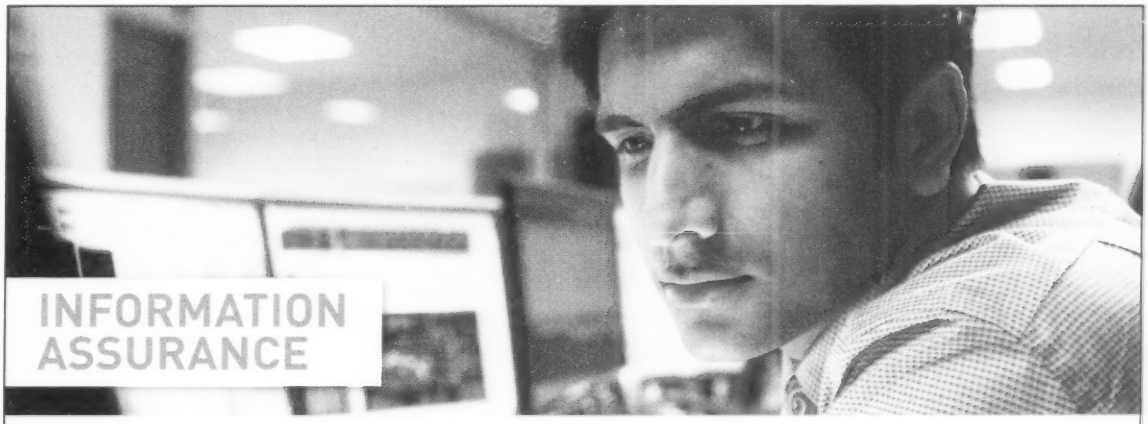
"One thing I'm telling IT people is that if you can get international experience, [do it]. If you have the opportunity to take on an international role, even if you only do that for a year or two, it will make you stand out," Greco says.

"Also, don't move sideways or relocate for a 5% pay increase," she adds. "But if it's 10% to 15%, take a look at it."

And telecommuting may not be the best option.

"Telecommuting is good for a while, but out of sight is out of mind," Greco says. "If you want to climb the ladder, you really have to play the game. You can be the best worker, but if you're not there, people don't know you."

— STACY COLLETT

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# DAVID FOOTE

## IT Pay: Still Crazy After All These Years

**A FUNNY THING HAPPENED** to IT organizations 20 years ago: They started leaking people. The business units began attracting a migration of workers with tech smarts, business savvy, "soft" skills and a grasp of what customers wanted and how to deliver it to them.

What began as a trickle of business application developers and support personnel became a torrent accelerated by demand for ERP, CRM, e-commerce, data warehousing and a hundred other technologies. Suddenly every enterprise function, product and service team, and project group wanted these multiskilled IT-business specialists. The definition of "IT professional" changed forever.

The unenviable task of defining the roles of these IT migrants and then figuring out how to compensate them fell to frazzled HR departments. Were they IT workers, or were they sales engineers, marketing consultants, logistics engineers or operations specialists? Or were they both? With salary surveys, which are organized by job title, you can't comfortably have it both ways.

The problem was complicated by the relentless adoption rate of new technologies, globalization and senior management's demands for fast and flawless execution. Compensation specialists were in over their heads as the war for IT talent, until then outwardly facing, turned inward.

So, how are things today? Better, but not great. I'm shocked that so many HR departments still struggle with chaos in the axis of IT job titles and salary surveys, and the countless new combinations of technical skills and subject matter expertise. Many can barely handle the demands for talent that arise as new ideas gain traction.

I'm also astounded that WorldatWork, the world's largest professional organization educating and certifying compensation professionals, hasn't yet grasped the differences in pay practices that separate the two groups of IT workers in the U.S.: the 4 million who work in more traditional IT jobs, and the 16 million IT-business hybrids who don't. Specialized compensation training unique to this fast-growing hybrid segment is scarce.

But are job titles really the most important thing to consider when we think about IT compensation? I don't think so. Titles can't be ignored, but *specialized skills* are what's really in demand in today's IT talent marketplace of contractors, consultants, managed services, cloud computing, outsourcing and offshoring, and full- and part-time employees. And without pay premiums awarded for specialized skills, it's nearly impossible to accurately calculate the true market value of many of today's IT professionals. Moreover, without paying skills premiums, the ability to use compensation to attract and retain talent is undermined.

Skills pay premiums allow employers to differentiate pay for people who have identical job titles but considerably different job descriptions and responsibilities — a widespread problem not likely to disappear soon. Likewise, avoiding the addition of a zillion new job titles makes HR administration simpler and cheaper. And skills premiums can be applied to consulting rates or full-time pay, adjustable up or down at any time according to market forces and internal skill demands. Fortunately, there are reliable, frequently updated surveys on skills and certification compensation available.

Keep this in mind when you hire your next expert in social media, mobile computing, data analytics, collaboration technology, SAP — or any of a few hundred other hot specialties. ◆

**Titles can't be ignored, but specialized skills are what's really in demand in today's IT talent marketplace.**

**David Foote** has been analyzing trends and publishing benchmark research about the human side of IT value creation for several analyst firms, including Foote Partners, where he is co-founder and CEO. Contact him at dfoote@footepartners.com, follow him on Twitter at @FPview, or join his IT Skills & Certifications Forum on LinkedIn.

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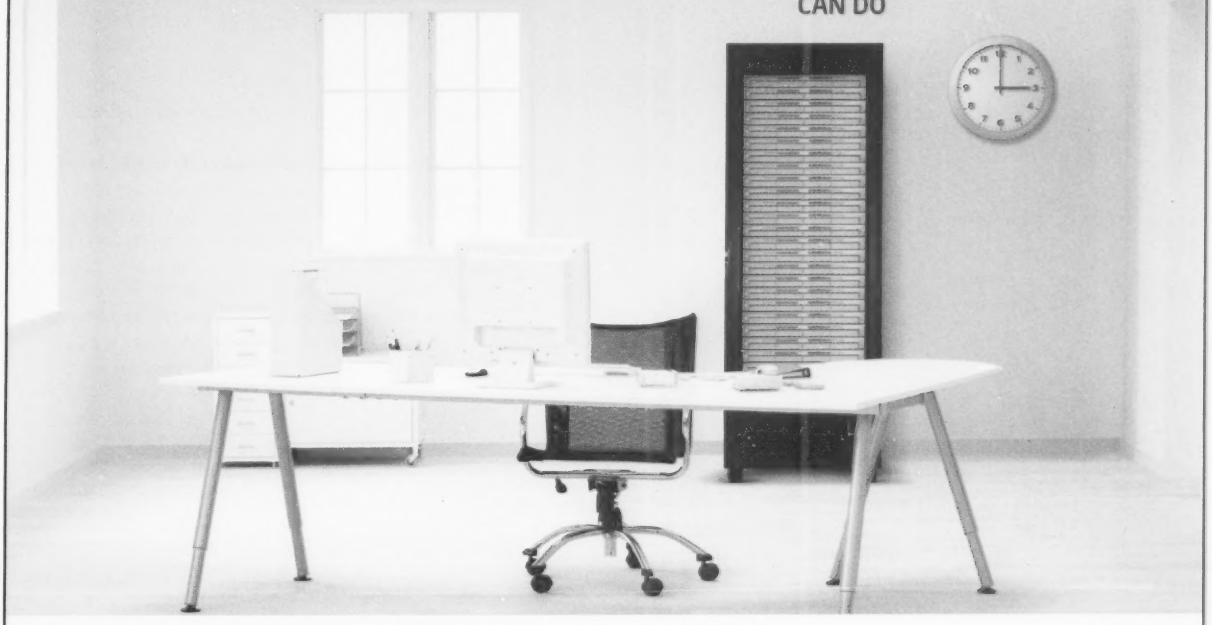

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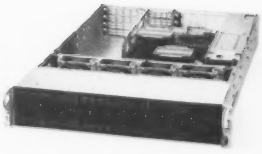

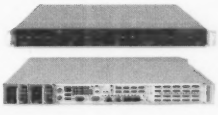

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# Career Watch

Q&A

## Kathryn Ullrich

*The executive search consultant and author of* **Getting to the Top: Strategies for Career Success** *talks about job-hunting techniques.*

**What's the No. 1 mistake that job hunters make?** Too many job hunters play the generalist card, saying, "I'm good at writing code" or "I do project management." Today, companies aren't looking for generalists; they're looking for *specialists*. Job seekers, as a result, must develop a personal brand, distinguish their skills and strengths, and design their job search around specific industries and organizations. Recently, for instance, a well-known software company was seeking an IT director "skilled in advanced testing techniques, agile methodologies and analytical measurements for improving releases." In short, it wanted a specialist.

**Are people getting the most out of social media as a job-hunting tool?** Many job hunters are leveraging social media effectively. Yet many others are attempting to get too much out of it, while still others aren't doing enough. My advice regarding the top three sites is, first, to make LinkedIn your No. 1 job-search tool on social media. Besides updating your profile and looking at job postings, join groups, follow organizations, and research contacts at target companies. Employers posting jobs on LinkedIn will probably respond to your messages, but don't count on everyone reading LinkedIn messages.

As for Facebook, you of course want to network, but also be sure to visit the Jobs section on Facebook Marketplace, where you can search by keyword, company name, job title or location. Also, be sure to check your privacy settings. Corporate recruiters can, and will, peruse your page.

With Twitter, you can follow target companies, plus have news on key positions and organizations delivered to your smart device. Use hash marks to search for jobs, i.e., #job or #Java.

Finally, remember that humans, not computers, do the hiring. Once you've done your research online, send personal emails, make telephone calls and set up face-to-face meetings.

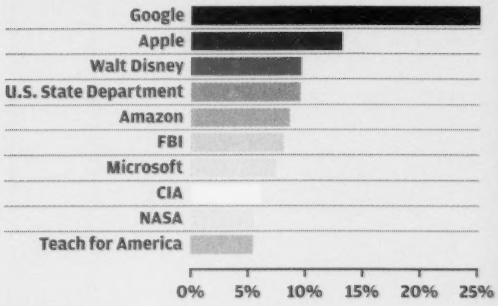
**People who work with technology sometimes have all the skills needed for an available job, but not the skills needed to get through an interview successfully. How can they improve in that area?** When you develop products or services, you must think about the customer's wants and needs. So in an interview, think of your interviewer as your customer, and focus on what's important to him or her. (Hint: Study the job specifications along with the key questions in your preliminary screening interview.) If an interviewer asks for an example of a successful project, pick one that might be most relevant to his or her needs. For instance, if the company delivers online product releases on a daily basis, don't discuss a software program with a one-year development cycle. Also, to prepare for interviews, create a list of common questions, develop a variety of answers, and practice out loud.

– JAMIE ECKLE

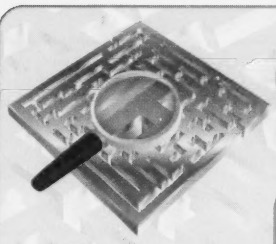
## TECH IS TOPS

Young professionals (college graduates with one to eight years of work experience) were asked to choose up to five "ideal" workplaces from a list of 150 employers. Several IT companies made the top 10. Moreover, Facebook got the most write-in votes.

**The top 10, based on the percentage of ballots they appeared on:**




SOURCE: UNIVERSUM SURVEY OF 10,306 YOUNG PROFESSIONALS, CONDUCTED NOVEMBER 2010 TO JANUARY 2011



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# SHARK TANK

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

HAL MAYFORTH

## Just Another Day in Paradise

Pilot fish arrives at work to discover that the entire local network is down and the phones are ringing off the hook with angry users. "We discover water is pouring into the second-floor computer room, running down the racks that hold the switches, file servers, etc.," says fish. "A tech calls to say that both rack-mounted UPSs are fried and quickly replaces them with spares. Maintenance is called about the leaky roof. So, what caused the leak? We are told that during the recent ice storm, the general manager was on the roof with an ice pick trying to bust the ice loose. On the bright side, a nearby roof did collapse, but not this one. And I have 30 days to retirement."

### How to Save Money in IT

This company's business is growing, and that means it's time to shift things around in its network of warehouses. The plan calls for a very large distribution center to get much less use, and for two new distribution centers to be opened in other parts of the country, reports a pilot fish on the scene. Of course, costs have to be kept down, so management decides that the equipment from the existing warehouse should be sent to one of the new distribution centers to hold down the cost of outfitting it. Are you sure? fish and his team ask. The existing warehouse is over 800,000 square feet, and you're still going to be using part of it. Are you positive that we won't need the wireless access points, the large UPS or the phone system there ever again? The answer comes back: Absolutely not. Have the equipment stripped out and sent to the new site. Two weeks later, fish's team is on-site at the new location, installing the equipment. Vendors are running cabling and power and installing the phone system into its new home. Sighs fish, "As we were nearing completion, we received an e-mail from management: How much would it cost and how long it would take to put the old warehouse back the way it was? Our answer: More than it would have a few weeks ago."

### Starting Out Right

This help desk pilot fish has just been introduced to a newly hired support tech who's starting his first day on the job. "After chatting with him for five minutes, I received a call from a secretary claiming that part of her computer had been stolen," says fish. "She said that the front of it was missing and that she couldn't turn it on. I sent the new guy out on his first mission, asking him to figure out what had been stolen. When he got back a few minutes later, I asked him what the problem had been. He told me that the computer was turned around backward, and apparently the secretary had never had a good look at the back of her computer. I told him, 'Welcome to your new job!' "

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OPINION

# FRANK HAYES

# It's Not Funny When Security Becomes a Joke

**Security is now so mainstream that it's getting the *Two and a Half Men* treatment.**

**HOW MUCH HAS COMPUTER SECURITY CHANGED** since the last time you looked? It's now a half-hour TV comedy called *Breaking In*. Will it be funny? Will it be realistic? You're missing the point: Security is now so mainstream that it's getting the *Two and a Half Men* treatment — and that's bad news for your IT shop.

The problem isn't that a sitcom based on penetration testing will teach bad guys how to break into your systems. They already know more than they're likely to learn from a bunch of TV-show gags on Wednesday nights. No, the problem is that, more and more, the general public thinks of security itself as a joke.

Consider Anonymous, the group that attacked Visa and MasterCard after the credit card companies stopped processing payments made in support of WikiLeaks. After security firm HBGary Federal said it knew who the leaders of Anonymous were, five of the group's members hacked their way into HBGary's servers and published 50,000 embarrassing company emails — and then explained how they took advantage of HBGary's lax security to break in.

That was February. In March came the punch line: The Anonymouser who had pretended to be HBGary's CEO and needed only a 15-minute email exchange to convince the company's systems administrator to drop security is actually a 15-year-old girl. Or at least that's what "Kayla" claimed in an interview with *Forbes*. Oh, those wacky kids!

The day after that revelation, RSA Security announced that someone had broken into *its* systems, rooted around and walked away with secret details of RSA's SecurID authentication technology — and those details might, the company warned, make the pricey SecurID less secure for, um, ID'ing users.

And that was just a few weeks after a man from Belarus pleaded guilty in New York for running an identity theft ring that compiled detailed dossiers on each victim in order to make sure the thieves would have an answer for every conceivable challenge question when they called to transfer money or make other fraudulent transactions.

Those dossiers included everything from Social Security numbers to — actual example — a victim's oldest sibling's nickname. With ammunition like that, challenge-based security really *is* a joke.

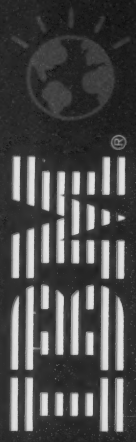
Yes, it's that bad. And the usual ways *you* might try to up the security ante — pile on the encryption and biometric authentication and lots of other cutting-edge security technology — won't fly. They're too expensive, and besides, the weak links are almost always people, not technologies.

But instead, what if you go straight to users and point out the joke that security has become? That there really are bad guys out there, and security problems are so widespread that they're not just all over the news, they're even the subject of TV comedy.

And that makes it more important than ever to remember the basics: Don't share your passwords or leave them out in plain sight. Don't let strangers through security doors. Don't assume that anyone who calls you is from IT. And don't send any company information to anyone unless you're *sure* they're supposed to have it.

Who knows? If you point out that security has become a punch line, maybe your users will realize that what they do matters. And if that gets them to take security a little more seriously — well, that's something worth smiling about. ◆

**Frank Hayes** has been covering the intersection of business and IT for three decades. Contact him at cw@frankhayes.com.



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